

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4, 6, 7, 9-12, 15, and 18 are amended by the present amendment.

Applicants respectfully submit that amendments to the claims find support in the application as originally filed at least at Figure 6. Thus, no new matter is added.

In the Office Action, Claims 1, 5, 9, 12, 13, and 18 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,923,380 to Yang et al. (herein “Yang”); and Claims 2-4, 6-8, 10, 11, and 14-16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Yang in view of Bastuscheck, “Technique for Real Time Generation of Range Images,” IEEE 1989 (herein “Bastuscheck”).

Applicants respectfully traverse the rejection of Claims 1, 5, 9, 12, 13, and 18 under 35 U.S.C. § 102(b) as anticipated by Yang, with respect to amended independent Claims 1, 9, and 18.

Amended Claim 1 is directed to a pseudo 3D image generating apparatus that generates a pseudo three dimensional image of a subject from at least two images captured in different illumination conditions of the subject. The apparatus includes, in part, an image storing unit that stores the at least two images of the subject captured in the different illumination conditions. The different illumination conditions in which the at least two images of the subject are captured are generated by means of a single light source. The apparatus also includes a depth computing unit that computes a pseudo depth value for each pair of corresponding pixels of the at least two images of the subject, based on an operation between pixel values of the corresponding pixels, thereby to form the pseudo three-dimensional image of the subject. At least two different pseudo depth values are given to the pairs of the corresponding pixels of the least two images of the subject. Independent Claims

9 and 18 include similar features directed to a method of generating a pseudo 3D image and a computer readable recording medium, respectively.

Applicants respectfully submit that Yang fails to teach or suggest each of the features of the amended independent claims. For example, Yang fails to teach or suggest a unit that computes a pseudo depth value for each pair of corresponding pixels of at least two images that are captured in different illumination conditions, where the different illumination conditions are generated by means of a single light source.

Yang describes a method for replacing the background of an image. In particular, Yang indicates that an original background may be replaced with a preselected background, and Yang indicates that two infrared images, with different intensities of infrared illumination and produced by background IR light 110 and front IR light 116, are compared to produce a difference image of light intensity differences between corresponding pixels of the two images.¹ In other words, Yang describes capturing images generated with multiple light sources (e.g., background IR light 110 and front IR light 116) and comparing the resulting image. Thus, Applicants respectfully submit that Yang fails to teach or suggest “the different illumination conditions in which the at least two images of the subject are captured are generated by means of a single light source,” as recited in independent Claim 1, and Yang fails to teach or suggest “capturing the at least two images of the subject in the different illumination conditions generated by means of a single light source,” as recited in independent Claims 9 and 18.

Accordingly, it is respectfully submitted that independent Claims 1, 9, and 18, and claims depending therefrom, patentably define over Yang.

Therefore, it is respectfully requested the rejection under 35 U.S.C. § 102(b) be withdrawn.

¹ Yang at Abstract, Figure 1, and at column 5, line 58 to column 6, line 4.

Further, Applicants respectfully traverse the rejection of Claims 2-4, 6-8, 10, 11, and 14-16 under 35 U.S.C. § 103(a) as unpatentable over Yang and Bastuscheck.

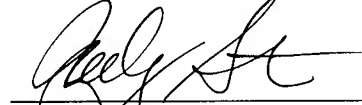
Bastuscheck describes techniques for real time generation of range images based on optical triangulation and time of flight techniques. However, it is respectfully submitted that Bastuscheck also fails to teach or suggest computing a pseudo depth value for each pair of corresponding pixels of at least two images of the subject captured in different illumination conditions generated by means of a single light source, which Yang fails to teach or suggest as discussed above. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103(a) also be withdrawn.

Accordingly, Applicants respectfully submit that independent Claims 1, 9, and 18, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment, this application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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